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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,246	05/03/2001	Akira Ikushima	ADACHI P163USP2	6256
20210	7590	11/29/2004	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			HOFFMANN, JOHN M	
		ART UNIT	PAPER NUMBER	
			1731	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/848,246	IKUSHIMA ET AL. <i>(P)</i>
	Examiner	Art Unit
	John Hoffmann	1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 05 November 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 7,25-31 and 33-36 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 7, 25-31 and 33-36 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7, 25 – 31 and 33-36 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The independent claims have been amended to require a particular "irradiating time". Examiner could find no explicit support for the particular irradiating time as claimed. Whereas there might be implicit support therefore, Examiner could not see any. This is deemed to be a *prima facie* showing of failure to comply. The burden is now on applicant to demonstrate that the requirement is complied with.

Likewise for the particular heating time that is newly claimed. Examiner could not find support for the particular time that is presently claimed.

Examiner could find no support for claims 34. Clearly, if the fiber is not maintained at the residual heat level during the coating step, the residual heat would dissipate from the fiber – and the defects could not be removed by the residual heat. The only basis for the insulation occurring prior to the heat treating is the non-elected embodiment where it is additional heat (not residual heat) which removes the defects.

The specification does not convey that the coating before treating was possessed by applicant at the time of the invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 25 – 31 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiVita 4028080 in view of Boniort 5247147.

See DiVita, col 2, lines 39-50 disclose the invention as claimed, i.e. the UV exposure and the use of heat are disclosed. However, there is no disclosure of residual heat, or any defect creation. Since DiVita does what Applicant does, one would reasonably expect the same results that Applicant got. If Applicant argues that DiVita would not get the same result that Applicant achieved, the burden would be on Applicant to demonstrate why one would not expect to get the same result. The fiber as created is a heated fiber.

Although, DiVita has the UV treatment during the formation of the fiber, it is possible that the fiber has cooled down to room temperature (and thus contains no residual heat). Boniort teaches that when using a process requiring a high-temperature, one can place the process close to the draw furnace - and thus use the fiber at an elevated temperature: see col. 1, lines 50-60 and col. 2, lines 51-58. It would have been obvious to do the DiVita treatment very close to the draw furnace, so as to

use the elevated temperature of the fiber - so that one would not have to spend time reheating the fiber.

As to the new limitations of claim 7: it is deemed that the irradiating time limitation is met, because the mechanism is a quantum event – a single UV photon causes each event. If one halves the exposure time, then one would expect about half the defects. As to the predetermine value: it is deemed that such does not require any manipulative step. Rather it appears to be a mental step. If one was performing the DiVita manipulative steps – or even applicant's manipulative steps – it would be impossible to tell whether said one was doing it for some random time or to achieve a particular level of transmittance.

As to the new heating time period – likewise, it is deemed that such is inherently met because it does the same thing that applicant does – one would expect the same result. Although the heating time period is not disclosed, such a heat based relaxation of defects is a statistical event. No matter how short a time period there is, some of the defects would cause the same shift that applicant got.

Alternatively, it would have been obvious to perform routine experimentation to optimize the variables in the DiVita process. As applicant argues – one of ordinary skill would realize that insufficient (or too much) heat or time might result in unsatisfactory results. Thus one would perform routine experimentation in the DiVita process. Even though DiVita is concerned with a different defect mechanism – the desired result would be the same – improved transmittance. Clearly, even if the artisan was not aware of the

defect that applicant is concerned with, the artisan would arrive at the same optimal values that Applicant does.

Claim 25 is clearly met.

Claim 26: see col. 2, line 26: 1849 angstroms = 184.9 nm. It is further noted that the intensity of light generally varies inversely with the square of the distance (e.g. sunlight on the earth is much more intense than sunlight on Pluto.) Thus the DiVita intensity would vary depending upon where the intensity is measured. The claim refers to 'an intensity' thus the claim is not limited to any particular intensity that occurs in the process. It would have been obvious to use routine experimentation to determine the intensity of light to use. Further, such would depend on the draw rate. A fast draw rate would require a higher intensity, as compared to a fiber with a slow draw rate. The total energy is much more important than the rate at which the energy impinges the glass.

As to the temperature: DiVita teaches 1000 C.

Claim 27 is clearly met.

Claim 28: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Claim 28 has the intention of preventing

deterioration – but no specific manipulative difference is indicated by the intention. It is noted that the claim does not actually require the prevention of deterioration – nor does it specify any degree of prevention. It is noted, as an extreme case, Applicant's treatment would not prevent the damage caused by a nuclear explosion.

Claim 29: it is deemed that the reduction is sufficiently reduced for the DiVita purpose – in that it doesn't result in a non-working fiber.

New claims 33 and 35 are clearly met.

As to claims 34 and 36. Boniort has a 1000 C heating. It is deemed that the fiber would be maintained with a 1000-300 C for at least a brief period of time, because things cannot cool instantly from 1000 to room temperature. Some period of time must elapse.

Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Di Vita and Boniort as applied to claim 26 above, and further in view of Kyoto 5221309.

Kyoto teaches to have fluorine in the cladding so as to allow easy propagation of light in the core (among other things) Col. 1, line 21 to col. 2, line 31. It would have been obvious to improve the DiVita fiber by having fluorine in the cladding, for the reasons of DiVita.

### ***Response to Arguments***

Applicant's arguments filed 5 November 2004 have been fully considered but they are not persuasive.

Applicant argues that it is possible that with the DiVita process it possible that no defects will occur, and that maybe none of the defects would be removed, or that there might be additional undesirable defects. However no evidence is supplied to support these assertions. *Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established.* In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). It is noted that sufficient heat would have to be added to the fiber – so as to get it to the temperature taught by the prior art.

The arguments regarding Boniort's failure to teach the UV treatment are not very convincing – because DiVita supplies the requisite teaching.

As to the request for review of the IDS filed 8 August 2004 – it is noted that it fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

It is argued that claim 32 is amended. The Office's copy of the claims indicate that it is cancelled.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Hoffmann  
Primary Examiner  
Art Unit 1731

11-26-04

jmh